



I know...

A **force** is needed to make a toy vehicle move.

A moving vehicle needs wheels and axles to move.

An axle is a rod that the wheels are attached to.

An axle can move and have static wheels - so the axle turns and the wheels turn with it.

An axle can be fixed to the vehicle body and the wheels attached so that they turn around it.

Toy vehicles can be made out of many different materials.

For a vehicle to move using electricity it needs a motor included in the circuit and a drive belt to turn the axel.

Electricity is the flow of an electrical power or charge from sources of energy like coal or oil.

Electricity was discovered by Benjamin Franklin.

An electrical circuit needs: a motor, a wire, a battery and a switch.

Some materials do not let electricity flow through them - they do not **conduct** electricity.

Some materials stop electricity and are used to make wires safe to touch. They are **insulators**.

Some materials allow electricity to flow through them - they are called **conductors**.

The correct way to cut wood using saws safely

Technical Vocabulary

Battery - a container in which chemical energy is converted into electricity and used as a source of power.

Battery snap - the battery snap is designed to snap onto the leads on the terminal end of any standard 9V battery. These battery straps have two leads, a red "positive" wire and a black "negative" wire.

Bulb - a glass bulb inserted into a lamp or a socket in a ceiling, which provides light by passing an electric current through a filament.

Cable tie - is a type of fastener, for holding items together, primarily electrical **cables** or wires.

Casing - a cover or shell that protects or encloses something.

Circuit - a roughly circular line, route, or movement that starts and finishes at the same place.

Component - a part or element of an item, machine or vehicle.

Conduct /conductor - a material or device that allows electricity or heat to flow through it or transmits heat or electricity.

Crocodile clip - a sprung metal clip with long, serrated jaws, used attached to an electric cable for making a temporary connection to a battery or other component.

Drive Belt - a belt that transmits drive from a motor, engine, or line shaft to a moving part or machine tool.

Insulator - a material that prevents the flow of electricity

Lens - a piece of glass or other transparent material with curved sides for concentrating or dispersing light rays,

Motor - a device that changes a form of energy into mechanical energy to produce motion.

Motor Mount - are used to connect a motor to the chassis.

Non-conductor - a material that does not allow electricity to flow through it.

Pulley - a wheel over which a belt, rope, or chain is pulled.

